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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,113	02/03/2004	Mehran Mokhtari	B-5100 620982-2	4865
36716	7590	07/01/2005	EXAMINER	
LADAS & PARRY 5670 WILSHIRE BOULEVARD, SUITE 2100 LOS ANGELES, CA 90036-5679			JEAN PIERRE, PEGUY	
			ART UNIT	PAPER NUMBER

2819

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/772,113	MOKHTARI ET AL.	
	Examiner	Art Unit	
	Peguy JeanPierre	2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 5/9/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9-11 is/are rejected.
- 7) ☐ Claim(s) 4-8 and 12-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki et al.(USP 5,831,567) in view of Kimura et al.(USP 6,281,828).

Kimura et al. disclose in Figure 1, an analog to digital converter that comprises a comparator section that comprises a plurality of comparators (9) that determines (outputs a detection level) a relationship in level between an input analog signal (1) and a reference signal (3), an encoder (5) that converts the comparison result of the comparator into a digital signal (see col. 2, lines 28-33).

Kimura et al. fail to teach a plurality of reference circuits where each reference circuit is coupled to a respective one of the plurality of comparators.

Seki et al. disclose in Figure 8 an analog to digital converter that comprises a plurality of comparators (12¹⁻⁵); a plurality of reference circuits; each comparator compares an input electrical signal (10) with a respective pre-selected reference voltage (11¹⁻⁵) (see col. 6, lines 13-16) to eliminate DC offset which is contained in the analog signal.

Therefore, it would have been obvious to one having ordinary skill in the art to modify the reference voltage generator of Kimura et al. by coupling individual reference circuit

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having pre-selected reference voltage to each comparator as taught by Seki et al. to improve performance and accuracy of the converter.

Allowable Subject Matter

3. Claims 4-8 and 12-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed on 5/9/2005 have been fully considered but they are not persuasive. Applicant's main argument is that Kimura "...does not even mentioned DC offset in the input analog signal nor discuss the problem in the ADC." Applicant further argues that the same reference voltage is used in all switching sections...". The Examiner agrees. However, the Examiner notes that there is no limitation of a "DC offset in the input analog signal". Has such limitation been recited in the rejected claims, the reference (Kimura) meets the language because it discloses a comparator coupled to a plurality of encoders.

Applicant argues that The Seki reference generates a digital signal indicative of the frequency of the input signal. The Examiner disagrees. The field of the invention clearly states the generation of the digital signal based on the analog signal.

The rejected claims recite an analog to digital converter that comprises a plurality of comparators coupled to a plurality of encoders. Kimura meets this portion of the claimed language. Missing from Kimura is a pre-selected reference voltage. Seki discloses a

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preselected reference voltage. Thus both references can be combined to meet the claim language.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peguy JeanPierre whose telephone number is (571) 272-1803/272-1803. The examiner fax phone number is (571) 273-1803.


Peguy JeanPierre
Primary Examiner